

Amendments to the Specification:

Please replace paragraph 52 at page 10 starting from "As set forth above, ..." with the following amended paragraph:

--[52] As set forth above, the output of a sensor (~~not shown~~) is a sinusoid $x(t) = a(t)\cos\phi(t)$. This analog signal is input to A/D converter 12 and preferably sampled at ten times the sinusoid frequency, step 32, resulting in a sampling rate of 10 samples per cycle. The digitized sinusoid $x[n]$ is input to filter 14, step 34, which is preferably a digital band-pass filter, which is used to attenuate out-of-band noise such as harmonics and other spurious signals, particularly those close to the sinusoid frequency. Filter 14 may be a finite impulse-response type of filter.--

Please replace paragraph 60 at page 12 starting from "Processor 19, including phase process 20 and ..." with the following amended paragraph (an extra "." is deleted in line 8 of the replacement paragraph):

--[60] Processor 19, including phase processor 20 and amplitude processor 26 preferably includes a Coordinate Rotation Digital Computer (CORDIC) for fast digital trigonometric computations as described in the article "The Cordic Trigonometric Computing Technique", published in "IRE Transactions on Electronic Computers", September 1959 by J. E. Volder. The computations are effected via simple signal processing operations such as binary shifts, additions, subtractions and calling prestored constants. The CORDIC thus has a very simple and compact integrable circuit structure which in an integrated form requires a comparatively low gate count.[.] However, while, in the preferred embodiment, the CORDIC conversion process is used in separating phase attributes of complex samples from magnitude attributes, those skilled in the art can adapt other techniques, such as table look-ups and the like, in particular applications.--